

González-González, I. & Jiménez-Zarco, A.I. (2014).
The MOOC phenomenon: the current situation and an alternative
business model. *eLC Research Paper Series*, 9, 27-34.

THE MOOC PHENOMENON: THE CURRENT SITUATION AND AN ALTERNATIVE BUSINESS MODEL

Inés González-González¹
Ana Isabel Jiménez-Zarco²

-
1. University of Washington
(inespucela@hotmail.com)
 2. Universitat Oberta de Catalunya
(ajimenez@uoc.edu)

The MOOC phenomenon: the current situation and an alternative business model

ABSTRACT

Massive Open Online Courses (MOOCs) are a recent phenomenon that has achieved great media impact in the world of e-learning since the most prestigious US universities, and subsequently many others, became involved in them. In the last ten years changes that have occurred since the emergence of the Web 2.0, with the development of Open Social Learning (OSL) and the rise of OpenCourseWare (OER),

leading to the MOOC phenomenon. Initially, and as part of this OER movement, MOOC began with the intention of providing open knowledge to people, with the understanding that it should be an asset to humanity (UNESCO 2012). In this paper we present a descriptive overview of the MOOC movement from its beginnings to the different business models being proposed.

KEYWORDS

e-learning, MOOC, Business model.



González-González, I. & Jiménez-Zarco, A.I. (2014). The MOOC phenomenon: the current situation and an alternative business model. *eLC Research Paper Series*, 9, 27-34.

INTRODUCTION

Massive online courses, known the acronym MOOC (Massive Open Online Courses), are a recent phenomenon that is raising a great deal of expectation. Few technological innovations have achieved the impact and interest one of this one. For example, Coursera - the main MOOC provider - currently has 9,2 million users. This explains why MOOCs have been considered, in the informative and scientific literature, as a revolution with great potential for the educational and academic world (Bouchard, 2011; Aguaded, Vazquez-Cano & Sevillano 2013).

Although according to various sources the first MOOC was said to have been “Connectivism and Connective Knowledge” by George Siemens and Stephen Downes of the University of Manitoba (Canada) in August 2008, lasting 12 weeks and with approximately 2,300 students, other course prerequisites may also to be considered as MOOCs, such as: (1) “From NAND to Tetris: Building a Modern Computer from First Principles” by David Wiley (2007) of the Utah State University (USA) and (2). “EC & I 831: Social Media & Open Education” by Alec Couros, University of Regina (Canada) in January 2008, with about 200 students enrolled for the first course becoming 350 from the general public for the second one. However, the term MOOC really started to mean something in October 2011, when Sebastian Thrun and Peter Norvig of Stanford University launched the course “Introduction to Artificial Intelligence” for people from all over the world, with more than 160,000 registered, achieving “massive” status for the first time.

In November 2012, the New York Times published an article entitled “The Year of the MOOC” (Pappano, 2012) which stated that 2012 had been the year of MOOCs. Certainly, that year alone, more than a dozen initiatives to offer MOOCs were founded or strengthened, for example, Coursera, Edx, iTunes U, Miriada X,

Udacity, among others. In this context, is clear that MOOCs have become established and are a very interesting resource for serving the growing unmet demand for training among the general public. In fact, in the last decade, universities have gradually become market oriented. And although universities have adapted to business demand, firms continue to emphasise that professionals coming out of educational institutions are still not meeting all the needs required by companies, which is leading them to consider using MOOCs as company training.

HISTORY OF MOOCS

MOOC: ORIGINS

Undoubtedly, the birth of the MOOC allows the mass audience - regardless of geographical or time distances - to have free access to a wide variety of quality knowledge. But what caused the emergence of MOOC? To answer this question, we must link the MOOC phenomenon to new scenarios that have taken place at the beginning of the 21st century.

The development of the information society and the use of information and communication technologies (ICT) have influenced leading terms like: *e-commerce*, *e-business*, *e-government* and *e-administrations*, and in education they have given rise to new methods and learning opportunities through the development of e-learning. The rise of e-learning has promoted the development of technological tools such as the Learning Management Systems (LMS) with the aim of responding to an urgent demand for online education and, on the other hand, a model that satisfies a new student profile that needs to balance working and personal life with studies. In this context, LMS have been the dominant platforms and have come to confuse technology with the underlying pedagogical

González-González, I. & Jiménez-Zarco, A.I. (2014). The MOOC phenomenon: the current situation and an alternative business model. *eLC Research Paper Series*, 9, 27-34.

model (Gil & Dominguez, 2012). Currently, due to the Web 2.0 phenomenon, based on the application of Web 2.0 tools (blogs, wikis, podcast, social networks, etc.) to the processes of e-learning, LMS have declined due to their closed models in favour of open and participatory models such as Open Social Learning (OSL).

In this respect, it must be emphasised that in 1999 the Massachusetts Institute of Technology (MIT) launched its project MIT OCW (OpenCourseWare), known in Spain by the acronym OER (Open Educational Resources). This project was an electronic publishing initiative intended, in principle, to create space to allow the inclusion of teaching materials for its courses which can, at the same time, be freely consulted by students and self-learners around the world. So, although they started slowly, OCW took hold in 2001 when MIT announced that it gave free and open access to its materials and training programs. This idea was so applauded and, today, many universities around the world have added to this movement and have their own space to publish their teaching materials. OCW has much in common with the MOOCs because it provides learning material to the user, but it has one significant difference: OCW learning is individual while MOOC learning is not (Martín Gonzalez and Garcia, 2013).

Therefore, according to DeWaard, Abajian, Gallagher, Hogue, Keskin, Koutropoulos and Rodriguez (2011), MOOCs appear as the last stage in the evolution of e-learning (e.g. mobiMOOC experience). In this sense, it is not a new concept to define MOOCs as a disruptive landmark (Christensen and Overdorf, 2000; Skiba, 2012; Barber, Donnelly, Rizvi and Summers, 2013), with all that implies, even adding nuances to tone down such consideration (Conole, 2013: 17).

WHAT IS A MOOC?

The term MOOC was coined in 2008 by Dave Cormier and Brian Alexander to describe the course called “Connectivism and Connective Knowledge” by George Siemens and Stephen Downes. It is a very recent term in a constant process of transformation which hinders a precise definition. Establishing a common definition is always tricky when trying to define a recent term that is in constant transformation. In fact, John Hennessy, president of Stanford, describes the MOOC phenomenon as a “tsunami”. Currently, the term with greatest emphasis that has now broken into the field of higher education via the Internet is the definition based on its acronym MOOC: massive, open, online courses (Johnson, Adams, Cummins, Estrada, Freeman and Ludgate, 2013; Rodriguez, 2012).

According to Castaño and Cabero (2013, 89) for a course can be considered a MOOC, it must have the following distinctive features:

- An educational resource that has some resemblance to a traditional class.
- Start date and a finish date.
- Assessment mechanisms.
- Online.
- Free to use.
- Open access through the website and no admission criteria.
- Large-scale interactive participation on a large-scale of hundreds of students.

De la Torre (2013) notes that MOOC lead us to recognise the significance of informal learning in our society, as there is more and more important in the labour market: your ability to do new things and things that you are able to prove.

Therefore, despite the fact that it is a constantly evolving concept, all definitions agree that a MOOC is an online course aimed at



González-González, I. & Jiménez-Zarco, A.I. (2014).
The MOOC phenomenon: the current situation and an alternative
business model. *eLC Research Paper Series*, 9, 27-34.

large- scale interactive participation and open access via the web. In addition to traditional course materials such as videos, readings, and problem sets, MOOCs provide interactive user forums that help build a community for the students, professors, and TAs (Teaching Assistants) (Wikipedia 2012).

From the viewpoint of “Open” aspect, at the moment it should be noted that platforms offering MOOCs are increasing. The main English-speaking platforms are: Coursera, EdX and Udacity and, in the Latin American field, Miriadax and RedunX. Their importance lies in the high figures and the “MOOCs rising” infographic from an article by Nature News emphasises this (see figure 1).

It is worth mentioning that, with regard to the various aspects involved in MOOCs, consensus was still not reached (Chamberlin and Parish, 2011). Quite the contrary, in fact. For example, there is a debate on the issues

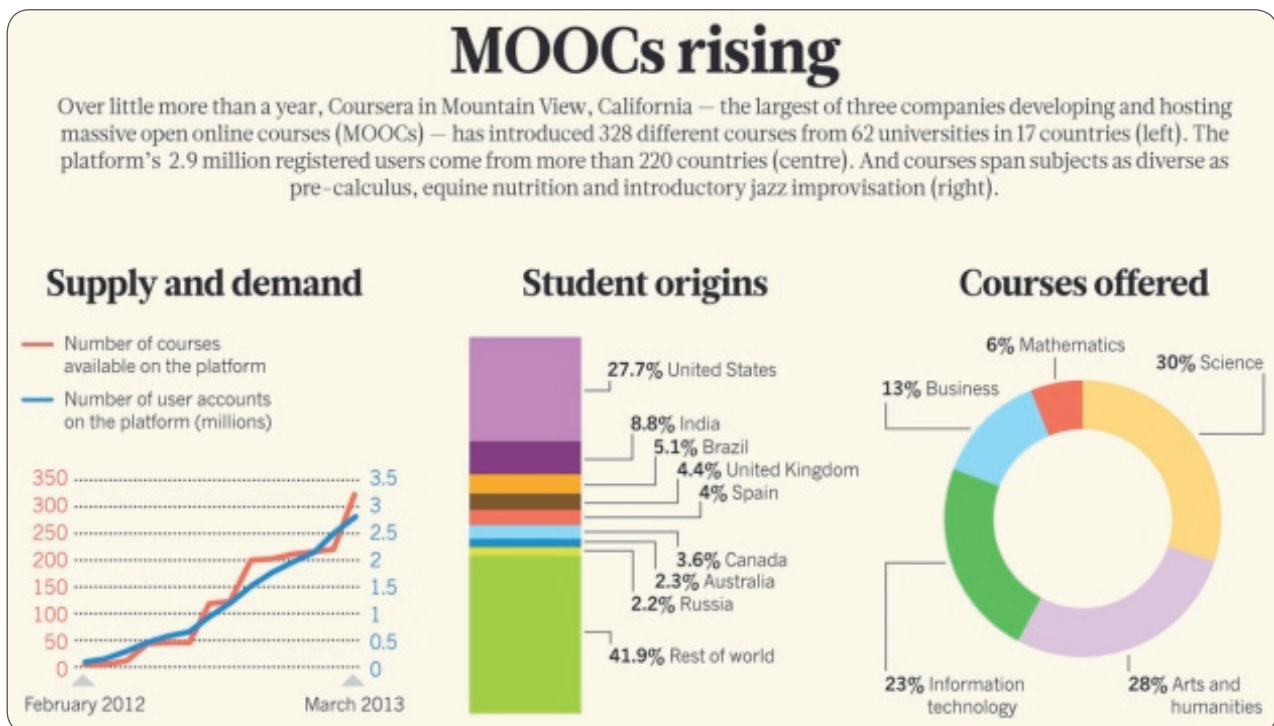
such as classification (Baggaley, 2013), their role in Higher Education (Sandeena, 2013), accreditation (Eaton, 2012), e-learning or blended learning (Bruff, Fisher, McEwen and Smith, 2013), and others.

CLASSIFYING MOOCs

MOOCs are presented with a variety of organisations and designs, involving different views about the objectives, methods and expected results. In this respect, Clark (2013) identified eight types, based on pedagogy:

- **transferMOOCs:** transfer MOOCs literally take existing courses and decant them into a MOOC platform.
- **madeMOOCs:** made MOOCs tend to be more innovative in their use of video, avoiding talking heads in favour of Khan Academy or Udacity hands-on board sequences. They also tend to have more of a formal, quality-driven

Figure 1. Impact on Higher Education. Infographic taken from: “MOOCs Rising” (Nature News)



González-González, I. & Jiménez-Zarco, A.I. (2014).
The MOOC phenomenon: the current situation and an alternative
business model. *eLC Research Paper Series*, 9, 27-34.

approach to the creation of material and more crafted, challenging assignments, problem-solving and various levels of sophisticated software-driven interactive experiences. Peer work and peer assessment is used to cope with the high student-teacher ratios.

- **synchMOOCs:** synchronous MOOCs have a fixed start date, tend to have fixed deadlines for assignments and assessments, and a clear end date.
- **asynchMOOCs:** without deadlines.
- **adaptiveMOOCs:** adaptive MOOCs use adaptive algorithms to present personalised learning experiences based on dynamic assessment and data gathering on the course and courses
- **groupMOOCs:** for small and specific groups.
- **connectivistMOOCs:** MOOC proposed by George Siemens and Stephen Downes.
- **miniMOOCs:** This is more typical of commercial e-learning courses, which tend to be more intensive experiences that last for hours and days rather than weeks.

Nevertheless, the two most spread types of MOOC are: xMOOC and cMOOC (Department for Business, Innovation and Skills, 2013; Scopeo, 2013; Vázquez et al., 2013; Downes, 2012; Siemens, 2012; Hill, 2012).

xMOOCs emerged in 2011 and are the most popular courses. They tend to be university online education courses offered by MOOC platforms. According to Martí (2012), this type of MOOC has the largest number of students enrolled and is also the most discussed at educational level. They are characterised by the display of videos and small exercise tests. Coursera, Udacity and EdX are some examples of xMOOCs.

While, cMOOC was based on connectivist pedagogy by Siemens and Stephen George Downes and, therefore, the first MOOC held. They argue that learning is generated through exchange of information and participation in

co-teaching and through intense interaction provided by the technology (Scopeo, 2013). cMOOC are discursive communities which create knowledge together (Lugton, 2012). For Martí (2012), it is a model that is based on individuals and not institutions.

Several authors (Martí, 2012; Scopeo, 2013), extend this division with a model that could be considered as a hybrid of the previous two, and is focused on tasks, some authors have come to call the xMOOC (Cabrero, Llorente and Vázquez, 2014). Specifically, Martí (2012) establishes three main types of MOOC based on different aspects, such as content, network and tasks. Each type of MOOC provides these three aspects, but in each of them one aspect is dominant (Lane, 2012):

- **Network-based:** this was the case of the first MOOC. It does not focus on streaming content or skills acquisition, but rather on the relationships between participants on the courses. It is not possible to use traditional assessment in these courses.
- **Task-based:** emphasises the acquisition of certain skills and abilities in solving activities. Creating a community of learners is secondary.
- **Content-based:** the most important is the acquisition of content by doing different tasks. Creating a community of learners again unless the principal and a student can pass the course without relating to other students. They have a large number of students and therefore the use of traditional evaluation using multiple-choice exercises is very appropriate.

xMOOCs are postulated as a real business model because they may enhance the brand image of the university, as well as for course certifications to students. While the original purpose of these courses was to open education and free access to higher education to as many people as possible, people and



González-González, I. & Jiménez-Zarco, A.I. (2014). The MOOC phenomenon: the current situation and an alternative business model. *eLC Research Paper Series*, 9, 27-34.

institutions have seen an opportunity to do business or make a profit. In a short time, several different platforms that offer courses of this nature have been developed and studies have been carried out to examine the potential impact on learner motivation, while different business models for MOOC have been described. This brings us to the next point.

MOOCS AS A BUSINESS MODEL: MAKING THE LEAP TO BUSINESS

There are numerous arguments for and against MOOCs, as reflected in the Wall Street Journal's 2013 survey of a set of experts in the area of MOOCs. One of the most negative motives is the high dropout rate, but, even so, it is necessary to have a business model for this educational model to persist. This formula, Social Learning, has free education as one of its essential premises. Currently, the challenge is to combine an attractive range of courses, which in turn serve as feedback for the institution's image, with a funding system to fulfil the above objectives (Vinander and Abuín, 2013).

The most prestigious universities in the world have been among those that have initiated and led this new formula of education. At this time, these are questioning how to increase the incremental associated costs (Cavanagh, 2013). To do this, several proposals have been raised: (1) collect a nominal tuition fee, (2) collect the certificates (3) making the leap to business.

The pioneer Sebastian Thurn has decided to solve the problem by contacting business to create MOOCs tailored to their needs. They are in its Udacity platform and certified by the companies. Coursera is also working along the same lines. Thus, companies that wish to may use a wide variety of courses in exchange for a financial sum (sponsorship), while the platform will be responsible for verifying and certifying

as appropriate. This is therefore an alternative business model that helps maintain the free initiative.

Initially, it might seem a little strange to think that a MOOC may be of interest to a company. However, as we shall see in this section, increasing numbers of companies are interested in this type of training product, for several reasons.

Traditionally, business training has come to be seen as a closed product for workers to study during working hours. Furthermore, the content generally was designed specifically for the company's needs, which resulted in a costly training. The problem is that, in the current situation, companies have limited resources for training. They are aware of the need to train their workers but they do not have the financial resources to pay for training, and cannot afford the loss of working hours to train their workers. It is in this context that virtual training is seen as a viable and attractive alternative because of: (1) the low cost, (2) the possibility of reconciling synchrony and asynchrony, (3) the fact that workers are not required to miss key times in their working days.

For this reason, a pedagogical model appropriate for the situation and reality of business environment is required. In this sense, MOOCs have a number of features that make them suitable for businesses: MOOCs allow continuous education and they make learning more dynamic and entertaining; in the MOOC working groups or peer collaboration (workers) can be created and worker training can be assessed in real time.

Thus, in March 2014, *El País* published an article entitled "Massive courses make the leap to businesses" (Blázquez, 2014) which said companies have discovered massive online courses as way of teaching "which is cheaper and more flexible than traditional teaching,

González-González, I. & Jiménez-Zarco, A.I. (2014). The MOOC phenomenon: the current situation and an alternative business model. *eLC Research Paper Series*, 9, 27-34.

and establishes working relationships between workers from different companies, because the tests and exercises are corrected and discussed among all them”.

CONCLUSIONS

The review carried out in this article brings us to different reflections. Although the MOOC phenomenon has been established since 2012, at the moment there is an ongoing debate on whether MOOCs are a fad or whether they can last with the current model. In other words, what is the future of MOOCs?

Without any doubt, the problem of financing MOOCs is the most recurrent and, in this sense, this article has considered, in an exploratory

way, several solutions, such as the collection of certificates, although in our opinion it is necessary to consider MOOCs as an alternative business model, but they stand the basis of his teaching, and for this, one of the most appropriate means and which are beginning to take important into consideration is that MOOC adapt to the training needs of companies. As we have seen, EdX and Coursera are starting in this direction, and, in our opinion, it can have an positive effect not only to the benefit of educational institutions, promoting the survival of MOOCs, it can also improve their brand image, while positioning them better in the global market and visibility. Among future research lines, the different business models that may occur could be highlighted, along with the benefits for higher education.

References

- Aguaded, J. I., Vázquez-Cano, E. & Sevillano, M. L. (2013). MOOCs, ¿Turbocapitalismo de edes o altruismo educativo? *SCOPEO INFORME 2: MOOC: Estado de la situación actual, posibilidades, retos y futuro* (pp. 74-90). Salamanca: Universidad de Salamanca Servicio de Innovación y Producción Digital.
- Baggaley, J. (2013). MOOC Rampant. *Distance Education*, 34 (3), 368-378.
- Barber, M., Donnelly, K., Rizvi, S., & Summers, L. (2013). An avalanche is coming: Higher education and the revolution ahead. London, UK: Institute for Public Policy Research.
- Bouchard, P. (2011). Network promises and their implications. In: The impact of social networks on teaching and learning. *Revista de Universidad y Sociedad del Conocimiento (RUSC)*, 8(1), 288-302.
- Bruff, D., Fisher, D., McEwen, K. and Smith, B. (2013). Wrapping a MOOC: Student Perceptions of an Experiment in Blended Learning. *MERLOT Journal of Online Learning and Teaching*, 9 (2), 187- 199.
- Cabero, J., Llorente, M.A. & Vázquez, A.I. (2014). Las tipologías de MOOC: Su diseño e implicaciones educativas. *Revista de curriculum y formación del profesorado*, 18, 13-26.
- Castaño, C. & Cabero, J. (2013). Enseñar y aprender en entornos m-learning. Madrid: Síntesis.
- Cavanagh, S. (2013). MOOCs provider targets teacher education. *Education Week*, 32 Issue 31, p9-9. 2/3p.
- Chamberlin, L. & Parish, T (2011). MOOCs: Massive Open Online Courses or Massive and Often Obtuse Courses? *eLearn*, 8.
- Christensen, C. & Overdorf, M. (2000). Meeting the challenge of disruptive change. *Harvard Business Review*, 78 (2), 67-77.
- Clark, D. (2013). MOOCs: taxonomy of 8 types of MOOC. Retrieved from <http://donaldclarkplanb.blogspot.ca/2013/04/moocs-taxonomy-of-8-types-of-mooc.html>



González-González, I. & Jiménez-Zarco, A.I. (2014). The MOOC phenomenon: the current situation and an alternative business model. *eLC Research Paper Series*, 9, 27-34.

- Conole, G. (2013). Los MOOC como tecnologías disruptivas: estrategias para mejorar la experiencia de aprendizaje y la calidad de los MOOC. *Campus Virtuales. Revista Científica Iberoamericana de Tecnología Educativa*, 2 (2), 26-28.
- De La Torre, A. (2013). *Algunas aportaciones críticas a la moda de los MOOC*. Available at: <http://www.educacontic.es/blog/algunas-aportaciones-criticas-la-moda-de-los-mooc>
- Department for Business Innovation and Skills (2013). *The maturing of the MOOC: Literature review of massive open online courses and other forms of online distance learning*. BIS Research Paper number 130.
- DeWaard, I., Abajian, S., Gallagher, M., Hogue, R., Keskin, N., Koutropoulos, A. & Rodríguez, O. (2011). Using mLearning and MOOC to understand chaos, emergence, and complexity in education. *International Review of Research in Open and Distance Learning*, 12 (7), 94-115.
- Downes, S. (2012). *Stephen's web. Stephen Downes. The rise of MOOCs*. Retrieved from: <http://www.downes.ca/post/57911>
- Eaton, J. (2012). MOOCs and accreditation: focus on the quality of "Direct-to-Students". *Education Council for Higher Education Accreditation*, 9, 1.
- Gil-Jaurena, I. & Domínguez-Figarrado, D. (2012). Open social learning y educación superior. Oportunidades y retos. *Revista Iberoamericana de Educación*, 60, 191-203.
- Hill, P. (2012). *Four Barriers that MOOCs must overcome to build a sustainable model. e-Literate*. Available at <http://mfeldstein.com/four-barriers-that-moocs-must-overcome-to-become-sustainable-model/>
- Johnson, L., Adams Becker, S., Cummins, M., Estrada V., Freeman, A. & Ludgate, H. (2013). NMC Horizon Report: 2013 K-12 Edition. Austin, Texas: the New Media Consortium. Available at <http://www.nmc.org/pdf/2013-horizon-report-HE.pdf>
- Lane, L. (2012). Three kinds of MOOCs. Retrieved from: <http://lisahistory.net/wordpress/2012/08/three-kinds-of-moocs/>.
- Lugton, M. (2012). *What is a MOOC? What are the different types of MOOC? xMOOCs and cMOOCs. Reflections*. <http://reflectionsandcontemplations.wordpress.com/2012/08/23/what-is-a-mooc-what-are-the-different-types-of-mooc-xmoocs-and-cmoocs>
- Martí, J. (2012). Tipos de MOOCs. Xarxatic. Available at: <http://www.xarxatic.com/tipos-de-moocs/>
- Martín, O., González, F. & García, M.A. (2013). Propuesta de evaluación de la calidad de los MOOC a partir de la Guía Afortic. *Campus Virtuales*, 2 (1), 124-132.
- Pappano, L. (November 4, 2012). The year of the MOOC. *The New York Times*. Retrieved from: http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?_r=0
- Rodríguez, C. (2012). MOOC and the AI-Stanford-like courses: two successful and distinct course formats for Massive Open Online Courses. *European Journal of Open, Distance and E-Learning*, 2012/II.
- SCOPEO (2013). SCOPEO INFORME N°2. MOOC: Estado de la situación actual, posibilidades, retos y futuro. Salamanca: Universidad de Salamanca-Centro Internacional de Tecnologías Avanzadas.
- Siemens, G. (2012). MOOCs are really a platform, Elearnspace. Available at: <http://www.elearnspace.org/blog/2012/07/25/moocs-are-really-a-platform/>
- Skiba, D. J. (2012). Disruption in Higher Education: Massively Open Online Courses (MOOCs). *Nursing Education Perspectives*, 33 (6), 416-417.
- Vázquez, E., López, E. & Sarasola, J.L. (2013). La expansión del conocimiento abierto: los MOOC. Barcelona: Octaedro.
- Vinader, R. & Abuín, N. (2013). Nuevos modelos educativos: los MOOCs como paradigma de la formación online. *Historia y Comunicación Social*, 18, 801-814.